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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,557	04/17/2001	Rolf Heiland	81666	8401
23685	7590	10/04/2004		
KRIEGSMAN & KRIEGSMAN 665 FRANKLIN STREET FRAMINGHAM, MA 01702			EXAMINER SINGH, ARTI R	
			ART UNIT 1771	PAPER NUMBER

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/836,557

Applicant(s)

HEILAND, ROLF

Examiner

Ms. Arti Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. The Examiner has carefully considered Applicant's amendments and accompanying remarks filed on 07/13/04. Applicant's amendments to claims 1 and 9, and addition of claim 13 have all been entered. Applicant's amendment's are not found to patentably distinguish the claims over the prior art, however at this time the Examiner has found better art which will be applied in the rejection set forth below. At this time during the prosecution, the previously made rejections could have been maintained and made final, but at this time are being withdrawn as the cited rejection is stronger. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

### *Specification*

2. The disclosure is objected to because of the following informalities:
3. The uses of Trademarks/Tradenames have been noted throughout this application (page 5 of the instant specification). The specific name/mark should be in ALL CAPS, followed by either a trademark or copyright symbol AND be accompanied by the generic terminology. All three criteria must be met. Although the use of Trademarks/Tradenames is permissible in patent applications, the proprietary nature of the marks/names should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as a trademark or tradename. To describe physical or other properties of material by mere use of trademark is objectionable since it has tendency to make trademark descriptive of product rather than leaving trademark to serve its traditional purpose, which is to identify product's source of origin. Appropriate correction is required.
4. The attempt to incorporate subject matter into this application by reference a claim by just its number, for instance "Claim 1 on page 2, line 14 of the instant specification) is

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improper and could make the claim indefinite, because in the current format the limitations of claim 1 are not listed. This notion further supported by the fact that either the claim or specification could be amended during the prosecution which could possibly result in new matter or making either or indefinite. Please rectify.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over USPN 4514463 issued to Alteepping et al.

8. Alteepping et al. disclose in their broadest interpretation a laminate suitable for use as a liner wherein the laminate comprises a batt of nonwoven polyolefin fibers, which are thermally bonded to an ethylene butylacrylate polymer (abstract). One of the aspects of their invention relates to a product suitable for use where a water resistant coating which is applied to liquid containers including, for example, water treatment plants, ponds, swimming

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pools, tank linings, pipe linings, etc. In a further aspect, the invention relates to a method of manufacturing these laminates and to the application of the laminates onto substrates.

It is an object of this invention to provide a laminate resistant to water and physical stress for service in application to substrates such as concrete, steel, ceramic, and wood. A further object of this invention is to provide a method for manufacturing such laminates and the application of the laminates to the substrates named. The substrate is then permanently protected from corrosion caused by water. Broadly, our invention resides in a method of making a liner for a liquid container comprising heating a polyolefin fabric having a weight of 100 to 300 grams per square meter at a temperature of 110 degrees to 160 degrees C for a time of 30 to 120 seconds, extruding onto said fabric an ethylene/butylacrylate copolymer containing 15 to 25 weight percent butylacrylate in an amount of 600 to 1200 grams per square meter, and forcing the polymer into the interstices of the fabric. In another aspect, our invention resides in a liner for a liquid container comprising a laminate comprising a layer of ethylene/butylacrylate copolymer in an amount of 600 to 1200 grams per square meter thermally bonded to a heat set non-woven polyolefin fabric having a weight of 100 to 300 grams per square meter, said ethylene/butylacrylate copolymer containing 15 to 25 percent butylacrylate on a weight basis. Still further, the invention resides in a method of lining a pond or pool by applying the liner to the substrate by means of an adhesive such as an epoxy resin. This is possible since the extrusion laminating one side of the non-woven to the polymer maintains the original structure of the non-woven to provide the adhesive bridge. The basic material for the production of such laminates is a non-woven polyolefin fabric produced by needle punching carded fibers of a polyolefin, preferably polypropylene staple yarn. Such non-woven fabrics are available from a number of sources and have a weight range of 100 to 300 grams per square meter. Fabrics having a weight of approximately 150

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grams per square meter have been found to be particularly suitable. To provide dimensional and thermal stability, the non-woven fabric is heat-set prior to use. The temperature and time of heat-set depend upon the particular polyolefin fabric used, but this can be easily determined by a few trials. For polypropylene fabric, a temperature of 110 degrees C to 160 degrees C for a time of 30 to 120 seconds is suitable. The thermoplastic coating resin which we use is an ethylene/butylacrylate copolymer having a relatively high butylacrylate content, i.e., 15 to 25 weight percent butylacrylate. This polymer works well in the process and provides good resistance to stress, abrasion, weather, water and to microorganisms. Furthermore, no plasticizer is used in the resin, an additive which is detrimental upon prolonged exposure to the elements. For instance, the abrasion resistance is approximately 20 times higher than polyvinylchloride, a resin which has been proposed for this use. The laminate is prepared by extruding the copolymer on the heat-set, non-woven fabric. Temperatures will depend, to some extent, upon the particular polymer, but the temperature should be in the range of 240 degrees to 280 degrees C. For good results, approximately 600 to 1200 grams should be applied per square meter of the non-woven fabric. This will produce a copolymer layer in the range of 0.5 to 1.5 millimeters thick. After copolymer application, the resin fabric laminate is passed between rollers in a roll mill, this forcing molten polymer into the interstices of one side of the non-woven fabric. In use, the laminate is applied to substrate, such as concrete, wood, metal, etc., by means of suitable adhesive such as epoxy resin. Such resins are commercially available and the adhesive generally comprises the epoxy resin in combination with a curing agent such as an amine. The exact composition of the copolymer is subject to variation and various additives can be added thereto, such additives including pigments, stabilizers, and the like. In application of the laminate to a substrate, joints between adjacent sections of the

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laminate can be bonded to be watertight either by hot melt sealing or by heat bonding of the overlapping layer (column 1, line 23 to column 2, line 40).

With regard to the preambular limitation of the claims, that is, "A protective hood," the Examiner is of the position that; Applicant has failed to recite definite structure of said hood other than the description given on pages 1 and 5 of the instant specification, which in its broadest interpretation is simply a composite comprising a nonwoven with a coating. Additionally, when relying on the figures it appears to be a tarp, which in turn are generally known in the art to be composed of coated fabrics which are applied to metal substrates such as the surface of a car which is what Applicant envisions; thus the preambular language is not given weight for its intended use. Further, a recitation of intended use of the claimed invention must result in a structural difference between the claimed invention and that of the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim limitations. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458,459 (CCPA 1963). Here it is the Examiner's position that the invention of Alteepping et al. is capable of being used as a protective hood for automobiles. The Examiner notes that not only does Alteepping et al. also desires the same end function of their laminate as Applicant, i.e. provides good resistance to stress, abrasion, weather, water and to microorganisms. Therefore, a skilled artisan would have found it obvious to employ the laminate of Alteepping et al. for use as a protective hood, motivated by the reasoned expectation of having a composite, which provides resistance to weather and abrasion.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ms. Arti Singh whose telephone number is 571-272-1483. The examiner can normally be reached on M-F 10-7pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 9/29/04

ars 09/26/04

Ms. Arti Singh  
Primary Examiner  
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